

Notice of Allowability

Application No.

10/612,955

Examiner

Satyendra K. Singh

Applicant(s)

TSUZUKI ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/16/07.
2. ☒ The allowed claim(s) is/are 12, 13 and 15-19.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 03/07/2007
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


SANDRA E. SAUZIER
PRIMARY EXAMINER

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment (and to charge appropriate statutory fee for the terminal disclaimer submitted by applicants) was given in a telephone interview with Mr. William J. Simmons (attorney on record) on March 7th, 2007.

Terminal Disclaimer

The terminal disclaimer filed on January 16th 2007 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent 7,022,523 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Rejoinder

Claims 12, 13, 15, and 17-19 are directed to an allowable product, a cell culture carrier, method of making and using the same. Pursuant to the procedures set forth in MPEP § 821.04(B), and upon further consideration of the amendments put forth by the applicants, instant claim 16, which is directed to a process of making the said product (see examiner's amendments to the claims below), **previously withdrawn from consideration** as a result of a restriction requirement, are **hereby rejoined** and fully examined for patentability under 37 CFR 1.104.

Because all claims previously withdrawn from consideration under 37 CFR 1.142 have been rejoined, the **restriction requirement** as set forth in the Office action mailed on July 12th 2005 is hereby **withdrawn**. In view of the withdrawal of the restriction requirement as to the rejoined inventions, applicant(s) are advised that if any claims including all the limitations of an allowable product claim or rejoined process claim are presented in a continuation or divisional application, such claims may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

The application has been amended as follows:

In the Claims

Claim 14 has been cancelled by this examiner's amendment.

The allowed claims 12, 13 and 15-19 have been amended by this examiner's amendment as follows:

12. A carrier for cell culture in the form of a sheet comprising a water-containing gel layer, which comprises alginic acid or alginate and an intermediate layer of chitosan, wherein the intermediate layer of chitosan binds the alginic acid or alginate gel layer to a collagen layer, wherein the chitosan is formed from a 1-5 % aqueous solution.

13. The carrier for cell culture according to claim 12, wherein the water-containing gel contains calcium alginate gel or alginic acid/polylysine gel.

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15. The carrier for cell culture according to claim 12, wherein the water-containing gel is formed on a porous membrane.

16. A method for producing the carrier for cell culture according to claim 12, which comprises the step of successively immersing the water-containing gel in the chitosan solution and then in a collagen solution.

17. A method for culturing cells, which comprises the step of allowing cells to form a cell layer on the carrier for cell culture according to claim 12.


18. A cell culture obtained by the method according to claim 17 comprising said carrier for cell culture and said cell layer.

19. A method for producing a cell culture, which comprises a step of allowing cells to form a cell layer on a surface of the carrier for cell culture according to claim 12 and a step of solubilizing the water-containing gel comprising alginic acid or alginate.

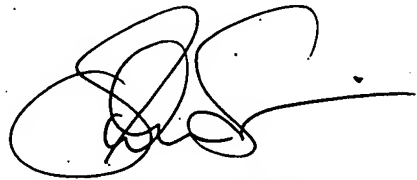
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satyendra K. Singh whose telephone number is 571-272-8790. The examiner can normally be reached on 9-5MF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon P. Weber can be reached on 571-272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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Art Unit 1657



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